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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,886	12/13/2004	Yoshihiro Yazawa	JFE-04-1330	1600

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IP GROUP OF DLA PIPER US LLP  
ONE LIBERTY PLACE  
1650 MARKET ST, SUITE 4900  
PHILADELPHIA, PA 19103

EXAMINER
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YEE, DEBORAH

ART UNIT	PAPER NUMBER
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1793

MAIL DATE	DELIVERY MODE
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07/15/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/517,886	<b>Applicant(s)</b> YAZAWA ET AL.	
	<b>Examiner</b> Deborah Yee	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 5/12/08.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11,13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 12, 2008 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4 to 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2000-336462 to Takahashi et al (hereinafter JP'462).

4. JP'462 in figure 2 discloses a ferritic stainless steel test example having a composition of 14% Cr- 0.5%Nb-0.15%Ti together with 0.035%P and about 0.0005% Mg, represented by a triangle, Δ, on a graph that closely meets the claimed composition and contains the presence of TiPFe precipitates such that at least 50% of the total P content in the steel is precipitated in the form of the TiPFe precipitates.

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5. Even though prior art steel additionally containing 0.5% Nb and about 0.0005%Mg, such would not be excluded by the limitation "consisting essentially of" recited by the claims 1 and 6 because their presence would not appear to affect the basic and novel characteristics of the present invention. Note 0.5% or less Nb and 0.003% or less Mg are permissible elements in present invention steel (see Applicant's specification last paragraph on page 20 to page 21).

6. With regard to method claims, JP'462 in paragraph 14 on page 3 of computer-generated English translation discloses making steel by hot rolling and/or cold rolling followed by heating at 700° C for 100 hours. Note the prior art temperature of 700° C would appear to be at the precipitation nose temperature of Ti base precipitates +/-50° C as recited by the method claims, since applicant's specification on page 33, lines 1-2 defines the temperature to be in the range 650 to 850° C . In addition, prior art holding time of 100 hours is within the time range of 1 to 100 hours disclosed in applicant's specification on page 33, lines 8-10.

7. Even though prior art does not teach a ferrite grain size of 6 or more or the average diameter of Ti-base precipitations ( $D_p$ ) = 0.05 to 1 microns or at least 50% of the total Ti content is precipitated in the form of Ti base precipitates as recited by one or more of the claims, such would be expected since composition and process of making and other properties are closely met, and in absence of proof to the contrary.

***Response to Arguments***

8. Applicant's arguments filed May 23, 2008 have been fully considered and are persuasive with regard to 35 USC 103 Rejection over Japanese patent 09137231 to Sumio. This rejection has been withdrawn.

9. Applicant's arguments filed May 12, 2008 have been fully considered but they are not persuasive with regard to 35 USC 103 Rejection over Japanese patent 2000-336462 to Takahashi et al. (hereinafter JP'462).

10. It was argued that the main objective of JP'462 is to improve strength at high temperature wherein the maximum feature is characterized by setting the P content, which precipitates as FeTiP, to 0.01% or less, that is to say decrease or suppress the amount of precipitated P content as low as possible. Also to achieve the best effect, addition of Mg, in addition to compound addition of Nb-Ti is specified as a basic composition. In contrast, present invention teaches fostering FeTiP precipitation

11. It is the Examiner's position that even though the objectives are different, prior art still teaches a ferritic stainless steel sheet that closely meets the claimed composition which is processed in substantially the same manner as claimed by Applicants to achieve a steel sheet wherein at least 50% of the total P content in the steel sheet is precipitated in the form of the Ti base precipitates, see prior art figure 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/  
Primary Examiner  
Art Unit 1793

/DY/